Schizachyrium scoparium - Bouteloua (curtipendula, gracilis) - Carex filifolia Herbaceous Vegetation

COMMON NAME Little Bluestem - (Sideoats Grama, Blue Grama) - Threadleaf Sedge Herbaceous Vegetation
SYNONYM Northern Great Plains Little Bluestem Prairie
PHYSIOGNOMIC CLASS Herbaceous Vegetation (V)
PHYSIOGNOMIC SUBCLASS Perennial graminoid vegetation (V.A)
PHYSIOGNOMIC GROUP Temperate or subpolar grassland (V.A.5)
PHYSIOGNOMIC SUBGROUP Natural/Semi-natural (V.A.5.N)
FORMATION Medium-tall sod temperate or subpolar grassland (V.A.5.N.c)
ALLIANCE SCHIZACHYRIUM SCOPARIUM - BOUTELOUA CURTIPENDULA HERBACEOUS ALLIANCE
CLASSIFICATION CONFIDENCE LEVEL 2
USFWS WETLAND SYSTEM Terrestrial

RANGE

Lacreek National Wildlife Refuge

Little bluestem grasslands in the Refuge are generally restricted to small patches on the slopes and shoulders of the sandhills.

Globally

This community is found in western North Dakota, western South Dakota, eastern and northern Wyoming, central and eastern Montana, southern Saskatchewan, and southern Manitoba.

ENVIRONMENTAL DESCRIPTION

Lacreek National Wildlife Refuge

Little bluestem stands typically occur on slopes and shoulders of variable steepness and aspect. The sites appear to be more stable (less susceptible to blowouts, but appear more prone soil creep) compared to some of the surrounding sandhills types.

Globally

This community is usually found on gentle to steep slopes with variable aspects (Hansen *et al.* 1984, Johnston 1987, Hansen and Hoffman 1988). The soil may be loamy sand, sandy loam, loam, or clay loam. There may be a substantial component of gravel. Hansen *et al.* (1984) found 7-36% gravel by weight in 16 stands in western North Dakota. The soils are typically shallow and occur over sandstone or limestone (Johnston 1987, Thilenius *et al.* 1995).

MOST ABUNDANT SPECIES

Lacreek National Wildlife Refuge

Stratum	Species
Herbaceous	*Schizachyrium scoparium, Andropogon hallii, Calamovilfa longifolia*

Globally

Stratum	Species
Graminoid	*Bouteloua curtipendula, Bouteloua gracilis, Schizachyrium scoparium*

CHARACTERISTIC SPECIES

Lacreek National Wildlife Refuge

Schizachyrium scoparium, *Calamovilfa longifolia*, *Yucca glauca*

Globally

Bouteloua curtipendula, Bouteloua gracilis, Carex filifolia, Schizachyrium scoparium

OTHER NOTABLE SPECIES

Lacreek National Wildlife Refuge

Stratum	Species
Graminoid	*Poa pratensis*

Globally

Stratum	Species
Graminoid	*Bromus inermis, Bromus tectorum, Poa pratensis*

VEGETATION DESCRIPTION

Lacreek National Wildlife Refuge

Little bluestem grasslands typically have moderate to dense cover that ranges between from 40 to 70%, with much of the soil surface covered by litter. Little bluestem (*Schizachyrium scoparium*) is strongly dominant with prairie sandreed (*Calamovilfa longifolia*) as a common associate. Few forbs are usually present. A few soapweed plants (*Yucca* glauca) are sometimes scattered within the stand.

Globally

This community is predominantly composed of graminoid species less than 1 m tall. Occasional *Pinus ponderosa* are scattered throughout the type. The vegetation cover is moderate to high. Thilenius *et al.* (1995) found that vegetation cover was 44 percent in Wyoming, and Hansen and Hoffman (1988) found 75 percent cover in North Dakota. The dominant species is *Schizachyrium scoparium,* with *Bouteloua curtipendula, Bouteloua gracilis*, and *Carex filifolia* as associates or codominants. *Andropogon gerardii, Carex inops* ssp. *heliophila, Carex duriuscula (= Carex eleocharis), Koeleria macrantha* and *Calamovilfa longifolia* are often present. *Calamovilfa longifolia* may be abundant on sandier soils. *Muhlenbergia cuspidata, Hesperostipa comata, Pascopyrum smithii*, and *Nassella viridula* may also be present. *Pseudoroegneria spicata* may be found in the western portions of this community (Jones 1992). In Manitoba, the graminoids *Festuca ovina* and *Elymus trachycaulus* and the lichen *Selaginella densa* are more abundant (Greenall 1995). Forbs do not contribute greatly to the canopy, but many species may be found in this community (Hanson and Whitman 1938). Among the forbs that may be found are *Echinacea angustifolia, Aster oblongifolius, Aster ericoides, Gaura coccinea, Lygodesmia juncea, Helianthus pauciflorus* ssp. *pauciflorus, Rosa arkansana, Liatris punctata, Pediomelum argophyllum (=Psoralea argophyllum), Dalea purpurea, Phlox hoodii*, and *Campanula rotundifolia*. There are very few woody species; those that are present are usually short shrubs such as *Artemisia frigida, Juniperus horizontalis*, and *Yucca glauca*. Litter often accumulates and may cover more than 50 percent of the ground (Hirsch 1985).

CONSERVATION RANK G3G4.

DATABASE CODE CEGL001681

SIMILAR ASSOCIATIONS (n/a)

COMMENTS

Lacreek National Wildlife Refuge

Little bluestem vegetation is relatively uncommon in the Refuge.

Globally

This type occurs on variable aspects throughout its range. Hansen *et al.* (1984) and McAdams *et al.* (1998) report this type on southerly aspects for western South Dakota and southwestern North Dakota. In southeast Montana and the Cheyenne River Basin, Butler *et al.* (1986) found that, in a ravine in western North Dakota, the most abundant species on a south-facing footslope were *Bouteloua curtipendula* and *Carex filifolia*. Other species that were abundant were *Schizachyrium scoparium, Calamovilfa longifolia, Hesperostipa comata*, and *Artemisia frigida*. *Pascopyrum smithii, Bouteloua gracilis*, and *Koeleria macrantha* were also present. Fire probably played a major role in this type, whereby periodic fires would increase graminoid production and deter tree growth.

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